



U.S. Fish & Wildlife Service

National Conservation Training Center

Oil Spill Curriculum



Birds, Habitat, & People: Recovering from the Deepwater Horizon Gulf Oil Spill

The Shorebird Sister Schools Program presents an activity that explores the impacts of the Deepwater Horizon Gulf Oil Spill on coastal birds and the work of many dedicated professionals helping in species recovery, with a focus on career development.

To learn more about the Shorebird Sister Schools Program (SSSP) visit: <http://www.fws.gov/sssp>.

Goal

Through studying a bird threatened by the Deepwater Horizon Gulf Oil Spill, students gain an understanding of the diverse job duties of people that work on refuges to conserve habitat for birds and other wildlife.

Grade: 9-12

Time: 3 class periods using the materials included with the activity.

Skills: cooperative work, reading comprehension, communication, discussion, organizing,

Subjects: science, language arts, social studies, geography

Objectives: Students will be able to—

1. Identify the threats to five bird species due to the Gulf oil spill.
2. Discuss the professional work and careers of people assisting in oil spill recovery.
3. Create a flow chart illustrating the oil spill's impacts on birds and wildlife habitat and the people working on the recovery effort.

Correlation to National Standards: See Standards chart.

Vocabulary: See activity definitions list.

Materials – Class Period 1

1. Deepwater Horizon Gulf Oil Spill and Southeast Louisiana NWR Complex maps & overheads.
2. Bird species profiles
3. Birds and Oil Student Worksheet #1
4. Overhead or electronic copy of student worksheet.
5. Background readings (Activity Background Information, Effects of Oil on Wildlife and Habitat, Breton NWR, Species factsheets)

Method - Class Period 1

1. Before class, read the activity background information. Begin the class with an overview of the oil spill asking the class these questions to stimulate discussion.
 - Why are oil companies drilling in the Gulf of Mexico? How is oil used in our society?
 - What happened to the Deepwater Horizon platform?
 - Why are people worried about the spill?
 - What happens to the animals that became covered with oil?
 - What happens when the oil reaches the coast?
 - What is the process of biomagnification of pollutants?
 - What is the responsibility of the U.S. Fish and Wildlife Service?

Fill in student knowledge gaps with information from the background article.

2. Explain that students will explore the affects of the oil spill on wildlife and habitat at the Southeast Louisiana National Wildlife Refuge Complex (NWR) and will learn about the refuge staff working on spill recovery. Pass out copies of Oil Spill Map and NWR Complex Map. With a partner, have students identify the locations of the 8 refuges within the SE Louisiana NWR complex on the Oil Spill Map. If you are short on time, you could also do this as a whole class activity. Ask students to circle or highlight Breton and Delta National Wildlife Refuges. These are the 2 refuges of the complex most affected by the oil spill.
3. Divide the class into 5 groups and assign each group a bird species. Give each group factsheets of their species, *Effect of Oil on Species and Habitat*, and *Breton National Wildlife Refuge*. Each group should read the factsheets and answer the questions on the *Birds and Oil Student Worksheet* for their species. If time is short, allow students in their groups, to divide up finding the answers to the first 3 columns. The last column should be filled out through discussion among group members by analyzing what they have learned about how their bird lives (answers in first 3 columns), to determine how it is threatened by the oil spill (4th column).
4. Bring students back together and have groups report back. As a class, fill in the *Birds and Oil Student Worksheet* chart, recording answers on the overhead. Have all students fill in the chart as the information is reported.

Materials – Class Period 2

1. Career profiles
2. U.S. Fish and Wildlife Service Careers List
3. Oil Spill Response Factsheet
4. Student Careers Worksheet #2
5. Birds and Oil Student Worksheet #1 (from part 1 of this activity)

Method – Class Period 2

1. Briefly review the activity and discussion from the previous day. Explain that in part 2, students will learn about the people employed at the U.S. Fish and Wildlife Service's Southeast Louisiana National Wildlife Refuge Complex. They are working to protect and recover the habitat and wildlife after the Deepwater Horizon Gulf Oil Spill.
2. Students should return to their groups. Hand out the career profiles, one to each student (repeats are OK). Each student should read the career profile. Then, in their groups, students should fill out the Careers Student Worksheet. If there is sufficient time or as homework, have student's research other types of jobs that are involved in the oil spill cleanup. This could include researching other organizations and agencies such as the Coast Guard, NOAA, National Park Service, and Environmental Protection Agency.

A great website to begin research is <http://www.restorethegulf.gov/fish-wildlife>.

3. With the entire class, discuss the variety of careers presented. Pass out the *U.S. Fish and Wildlife Service List of Careers*. Give students a minute to read through the variety of careers. Now ask if they learned something new about any jobs present at the refuge or on the list. If anyone is interested in learning more about a particular career, discuss how they could research that position. (Find out where the closest wildlife refuge is located. Interested students can volunteer to work at the refuge visitor center or join the refuge friends group. Many refuges have a few paid summer job opportunities for high school students.

4. Close the activity by having students to pull out their Birds and Oil Student Worksheet #1 from part 1 of the activity. Ask them to individually fill out the last column of the chart drawing on information from the career profiles and class discussion.

Materials – Class Period 3

1. Poster board or newsprint, and markers
2. Student Worksheets #1

Assessment – Class Period 3

1. Using the information the students have gathered from the two previous class periods, have students, in groups or as a class, create a flow chart following one of the sample models included with this activity. Give them a minimum number of impacts, actions, and careers to put under each category. The flow chart must include a title and a discussion. Post the class project in class or on a school bulletin board.
2. Afterwards meet with students individually, asking them to explain their flow chart.
3. Assess students on their group participation in working with the chart.

Extension (Or homework activity)

Using the information in the chart and the factsheets 'Effects of Oil on Wildlife and Habitat,' and 'Birds, Habitat, & People: Recovering from the Deepwater Horizon Gulf Coast Oil Spill Background,' ask each student to draw a Gulf Coast food web and compose a paragraph summarizing the affects the oil spill on the web.

How Can You Help Conserve Fish & Wildlife

Visit a refuge, park, or other natural area near you. Many public lands are open free-of-charge. Consider asking for a birdwatching tour.

- If you live near the coast, volunteer for a beach clean-up.
- Volunteer for a beach or stream restoration project in your area.
- Join a local club, such as scouting or 4 H, which supports natural resource conservation.